

## User's Manual



## HSA 400 & HSA 402 US/Domestic HSA 400 & HSA 402 International Hideaway® Surface Access Products

Extron USA - West	Extron USA - East	Extron Europe	Extron Asia	Extron Japan	Extron China	Extron Middle East
Headquarters						
+800.633.9876	+800.633.9876	+800.3987.6673	+800.7339.8766	+81.3.3511.7655	+400.883.1568	+971.4.2991800
Inside USA / Canada Only	Inside USA / Canada Only	Inside Europe Only	Inside Asia Only	+81.3.3511.7656 FAX	Inside China Only	+971.4.2991880 FAX
+1.714.491.1500	+1.919.863.1794	+31.33.453.4040	+65.6383.4400		+86.21.3760.1568	
+1.714.491.1517 FAX	+1.919.863.1797 FAX	+31.33.453.4050 FAX	+65.6383.4664 FAX		+86.21.3760.1566 FAX	

# Precautions

## Safety Instructions • English



This symbol is intended to alert the user of important operating and maintenance (servicing) instructions in the literature provided with the equipment.



This symbol is intended to alert the user of the presence of uninsulated dangerous voltage within the product's enclosure that may present a risk of electric shock.

### Caution

- Read Instructions** • Read and understand all safety and operating instructions before using the equipment.
- Retain Instructions** • The safety instructions should be kept for future reference.
- Follow Warnings** • Follow all warnings and instructions marked on the equipment or in the user information.
- Avoid Attachments** • Do not use tools or attachments that are not recommended by the equipment manufacturer because they may be hazardous.

## Consignes de Sécurité • Français



Ce symbole sert à avertir l'utilisateur que la documentation fournie avec le matériel contient des instructions importantes concernant l'exploitation et la maintenance (réparation).



Ce symbole sert à avertir l'utilisateur de la présence dans le boîtier de l'appareil de tensions dangereuses non isolées posant des risques d'électrocution.

### Attention

- Lire les instructions** • Prendre connaissance de toutes les consignes de sécurité et d'exploitation avant d'utiliser le matériel.
- Conservier les instructions** • Ranger les consignes de sécurité afin de pouvoir les consulter à l'avenir.
- Respecter les avertissements** • Observer tous les avertissements et consignes marqués sur le matériel ou présents dans la documentation utilisateur.
- Eviter les pièces de fixation** • Ne pas utiliser de pièces de fixation ni d'outils non recommandés par le fabricant du matériel car cela risquerait de poser certains dangers.

## Sicherheitsanleitungen • Deutsch



Dieses Symbol soll dem Benutzer in der im Lieferumfang enthaltenen Dokumentation besonders wichtige Hinweise zur Bedienung und Wartung (Instandhaltung) geben.



Dieses Symbol soll den Benutzer darauf aufmerksam machen, daß im Inneren des Gehäuses dieses Produktes gefährliche Spannungen, die nicht isoliert sind und die einen elektrischen Schock verursachen können, herrschen.

### Achtung

- Lesen der Anleitungen** • Bevor Sie das Gerät zum ersten Mal verwenden, sollten Sie alle Sicherheits- und Bedienungsanleitungen genau durchlesen und verstehen.
- Aufbewahren der Anleitungen** • Die Hinweise zur elektrischen Sicherheit des Produktes sollten Sie aufbewahren, damit Sie im Bedarfsfall darauf zurückgreifen können.
- Befolgen der Warnhinweise** • Befolgen Sie alle Warnhinweise und Anleitungen auf dem Gerät oder in der Benutzerdokumentation.
- Keine Zusatzgeräte** • Verwenden Sie keine Werkzeuge oder Zusatzgeräte, die nicht ausdrücklich vom Hersteller empfohlen wurden, da diese eine Gefahrenquelle darstellen können.

## Instrucciones de seguridad • Español



Este símbolo se utiliza para advertir al usuario sobre instrucciones importantes de operación y mantenimiento (o cambio de partes) que se desean destacar en el contenido de la documentación suministrada con los equipos.



Este símbolo se utiliza para advertir al usuario sobre la presencia de elementos con voltaje peligroso sin protección aislante, que puedan encontrarse dentro de la caja o alojamiento del producto, y que puedan representar riesgo de electrocución.

### Precaucion

- Leer las instrucciones** • Leer y analizar todas las instrucciones de operación y seguridad, antes de usar el equipo.
- Conservar las instrucciones** • Conservar las instrucciones de seguridad para futura consulta.
- Obedecer las advertencias** • Todas las advertencias e instrucciones marcadas en el equipo o en la documentación del usuario, deben ser obedecidas.
- Evitar el uso de accesorios** • No usar herramientas o accesorios que no sean específicamente recomendados por el fabricante, ya que podrían implicar riesgos.

### Warning

- Power sources** • This equipment should be operated only from the power source indicated on the product. This equipment is intended to be used with a main power system with a grounded (neutral) conductor. The third (grounding) pin is a safety feature, do not attempt to bypass or disable it.
- Power disconnection** • To remove power from the equipment safely, remove all power cords from the rear of the equipment, or the desktop power module (if detachable), or from the power source receptacle (wall plug).
- Power cord protection** • Power cords should be routed so that they are not likely to be stepped on or pinched by items placed upon or against them.
- Servicing** • Refer all servicing to qualified service personnel. There are no user-serviceable parts inside. To prevent the risk of shock, do not attempt to service this equipment yourself because opening or removing covers may expose you to dangerous voltage or other hazards.
- Slots and openings** • If the equipment has slots or holes in the enclosure, these are provided to prevent overheating of sensitive components inside. These openings must never be blocked by other objects.
- Lithium battery** • There is a danger of explosion if battery is incorrectly replaced. Replace it only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

### Avertissement

- Alimentations** • Ne faire fonctionner ce matériel qu'avec la source d'alimentation indiquée sur l'appareil. Ce matériel doit être utilisé avec une alimentation principale comportant un fil de terre (neutre). Le troisième contact (de mise à la terre) constitue un dispositif de sécurité : n'essayez pas de la contourner ni de la désactiver.
- Déconnexion de l'alimentation** • Pour mettre le matériel hors tension sans danger, déconnectez tous les cordons d'alimentation de l'arrière de l'appareil ou du module d'alimentation de bureau (s'il est amovible) ou encore de la prise secteur.
- Protection du cordon d'alimentation** • Acheminer les cordons d'alimentation de manière à ce que personne ne risque de marcher dessus et à ce qu'ils ne soient pas éraillés ou pincés par des objets.
- Réparation-maintenance** • Faire exécuter toutes les interventions de réparation-maintenance par un technicien qualifié. Aucun des éléments internes ne peut être réparé par l'utilisateur. Afin d'éviter tout danger d'électrocution, l'utilisateur ne doit pas essayer de procéder lui-même à ces opérations car l'ouverture ou le retrait des couvercles risquent de l'exposer à de hautes tensions et autres dangers.
- Fentes et orifices** • Si le boîtier de l'appareil comporte des fentes ou des orifices, ceux-ci servent à empêcher les composants internes sensibles de surchauffer. Ces ouvertures ne doivent jamais être bloquées par des objets.
- Lithium Batterie** • Il a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

### Vorsicht

- Stromquellen** • Dieses Gerät sollte nur über die auf dem Produkt angegebene Stromquelle betrieben werden. Dieses Gerät wurde für eine Verwendung mit einer Hauptstromleitung mit einem geerdeten (neutralen) Leiter konzipiert. Der dritte Kontakt ist für einen Erdschluß, und stellt eine Sicherheitsfunktion dar. Diese sollte nicht umgangen oder außer Betrieb gesetzt werden.
- Stromunterbrechung** • Um das Gerät auf sichere Weise vom Netz zu trennen, sollten Sie alle Netzkabel aus der Rückseite des Gerätes, aus der externen Stromversorgung (falls dies möglich ist) oder aus der Wandsteckdose ziehen.
- Schutz des Netzkabels** • Netzkabel sollten stets so verlegt werden, daß sie nicht im Weg liegen und niemand darauf treten kann oder Objekte darauf- oder unmittelbar dagegen gestellt werden können.
- Wartung** • Alle Wartungsmaßnahmen sollten nur von qualifiziertem Servicepersonal durchgeführt werden. Die internen Komponenten des Gerätes sind wartungsfrei. Zur Vermeidung eines elektrischen Schocks versuchen Sie in keinem Fall, dieses Gerät selbst öffnen, da beim Entfernen der Abdeckungen die Gefahr eines elektrischen Schlags und/oder andere Gefahren bestehen.
- Schlitzte und Öffnungen** • Wenn das Gerät Schlitzte oder Löcher im Gehäuse aufweist, dienen diese zur Vermeidung einer Überhitzung der empfindlichen Teile im Inneren. Diese Öffnungen dürfen niemals von anderen Objekten blockiert werden.
- Litium-Batterie** • Explosionsgefahr, falls die Batterie nicht richtig ersetzt wird. Ersetzen Sie verbrauchte Batterien nur durch den gleichen oder einen vergleichbaren Batterietyp, der auch vom Hersteller empfohlen wird. Entsorgen Sie verbrauchte Batterien bitte gemäß den Herstelleranweisungen.

### Advertencia

- Alimentación eléctrica** • Este equipo debe conectarse únicamente a la fuente/tipo de alimentación eléctrica indicada en el mismo. La alimentación eléctrica de este equipo debe provenir de un sistema de distribución general con conductor neutro a tierra. La tercera pata (puesta a tierra) es una medida de seguridad, no puentearla ni eliminarla.
- Desconexión de alimentación eléctrica** • Para desconectar con seguridad la acometida de alimentación eléctrica al equipo, desenchufar todos los cables de alimentación en el panel trasero del equipo, o desenchufar el módulo de alimentación (si fuera independiente), o desenchufar el cable del receptáculo de la pared.
- Protección del cables de alimentación** • Los cables de alimentación eléctrica se deben instalar en lugares donde no sean pisados ni apretados por objetos que se puedan apoyar sobre ellos.
- Reparaciones/mantenimiento** • Solicitar siempre los servicios técnicos de personal calificado. En el interior no hay partes a las que el usuario debe acceder. Para evitar riesgo de electrocución, no intentar personalmente la reparación/mantenimiento de este equipo, ya que al abrir o extraer las tapas puede quedar expuesto a voltajes peligrosos u otros riesgos.
- Ranuras y aberturas** • Si el equipo posee ranuras o orificios en su caja/alojamiento, es para evitar el sobrecalentamiento de componentes internos sensibles. Estas aberturas nunca se deben obstruir con otros objetos.
- Batería de litio** • Existe riesgo de explosión si esta batería se coloca en la posición incorrecta. Cambiar esta batería únicamente con el mismo tipo (o su equivalente) recomendado por el fabricante. Desachar las baterías usadas siguiendo las instrucciones del fabricante.

# Extron's Warranty

Extron Electronics warrants this product against defects in materials and workmanship for a period of three years from the date of purchase. In the event of malfunction during the warranty period attributable directly to faulty workmanship and/or materials, Extron Electronics will, at its option, repair or replace said products or components, to whatever extent it shall deem necessary to restore said product to proper operating condition, provided that it is returned within the warranty period, with proof of purchase and description of malfunction to:

### USA, Canada, South America, and Central America:

Extron USA  
1001 East Ball Road  
Anaheim, CA 92805  
U.S.A.

### Europe, Africa, and the Middle East:

Extron Europe  
Hanzeboulevard 10  
3825 PH Amersfoort  
The Netherlands

### Asia:

Extron Asia  
135 Joo Seng Road #04-01  
PM Industrial Bldg.  
Singapore 368363  
Singapore

### Japan:

Extron Japan  
Kyodo Building, 16 Ichibancho  
Chiyoda-ku, Tokyo 102-0082  
Japan

### China:

Extron China  
686 Ronghua Road, Songjiang  
District  
Shanghai 201611  
China

### Middle East:

Extron Middle East  
Dubai Airport Free Zone  
F12, PO Box 293666  
United Arab Emirates, Dubai

This Limited Warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, abnormal operating conditions or non-Extron authorized modification to the product.

*If it has been determined that the product is defective, please call Extron and ask for an Applications Engineer at (714) 491-1500 (USA), 31.33.453.4040 (Europe), 65.6383.4400 (Asia), or 81.3.3511.7655 (Japan) to receive an RA# (Return Authorization number). This will begin the repair process as quickly as possible.*

Units must be returned insured, with shipping charges prepaid. If not insured, you assume the risk of loss or damage during shipment. Returned units must include the serial number and a description of the problem, as well as the name of the person to contact in case there are any questions.

Extron Electronics makes no further warranties either expressed or implied with respect to the product and its quality, performance, merchantability, or fitness for any particular use. In no event will Extron Electronics be liable for direct, indirect, or consequential damages resulting from any defect in this product even if Extron Electronics has been advised of such damage.

Please note that laws vary from state to state and country to country, and that some provisions of this warranty may not apply to you.

## 安全须知 • 中文



这个符号提示用户该设备用户手册中有重要的操作和维护说明。



这个符号警告用户该设备机壳内有暴露的危险电压，有触电危险。

### 注意

**阅读说明书** • 用户使用该设备前必须阅读并理解所有安全和使用说明。

**保存说明书** • 用户应保存安全说明书以备将来使用。

**遵守警告** • 用户应遵守产品和用户指南上的所有安全和操作说明。

**避免追加** • 不要使用该产品厂商没有推荐的工具或追加设备，以避免危险。

### 警告

**电源** • 该设备只能使用产品上标明的电源。设备必须使用有地线的供电系统供电。第三条线（地线）是安全设施，不能不用或跳过。

**拔掉电源** • 为安全地从设备拔掉电源，请拔掉所有设备后或桌面电源的电源线，或任何接到市电系统的电源线。

**电源线保护** • 妥善布线，避免被踩踏，或重物挤压。

**维护** • 所有维修必须由认证的维修人员进行。设备内部没有用户可以更换的零件。为避免出现触电危险不要自己试图打开设备盖子维修该设备。

**通风孔** • 有些设备机壳上有通风槽或孔，它们是用来防止机内敏感元件过热。 不要用任何东西挡住通风孔。

**锂电池** • 不正确的更换电池会有爆炸的危险。 必须使用与厂家推荐的相同或相近型号的电池。 按照生产厂的建议处理废弃电池。

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# 1

## Chapter One

### Introduction

About the Hideaway Surface Access Products

Features

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*All trademarks mentioned in this manual are the properties of their respective owners.*

### About the Hideaway® Surface Access Products

The patented Extron Hideaway HSA 400 and HSA 402 are furniture-mounted, architectural solutions for inconspicuous computer video interface connector access and control.

The HSA 400 provides space for two double-space (double-height) or four single-space Extron Architectural Adapter Plates (AAPs), a standard grounded AC receptacle, and two RJ-45 (Category 5/6) (CAT 5/6) connectors (figure 1-1). The HSA is available in a US version, with a US power receptacle, and an international version. Several different types of power receptacles are available for the international version, including Universal, UK, French, Israeli, Australian, Indian, European, and Swiss receptacles.

**NOTE** *The Universal AC outlet is fully compatible with Europlug, British, Indian, Danish, and Italian plug types. See the universal AC outlet guide on the Extron Web site, [www.extron.com](http://www.extron.com), for compatibility details on all plug types.*



**Figure 1-1 — HSA 400 hideaway enclosure**

The HSA 402 provides the same AAP space, but with two AC receptacles and four RJ-45 connectors. The AC receptacles and RJ-45 connectors are arranged symmetrically on opposite sides of the AAP opening (figure 1-2).

In both models, cabling inside the enclosure runs the AC power line(s) and RJ-45 signal lines from the HSA panel connectors to connectors on the bottom of the enclosure.

With an optional conversion kit, one or more of the RJ-45 (data) lines can be converted to an RJ-11 (telephone) line.

The installed enclosures fit nearly flush within a table or podium top, storing the AAPs and connectors out of the way and out of sight. To access the AAPs and connectors, the user presses down on the top of the enclosure, releasing a mechanical latch. A gas lift slowly tips the AAPs and connectors into view.



**Figure 1-2 — HSA 402 hideaway enclosure**

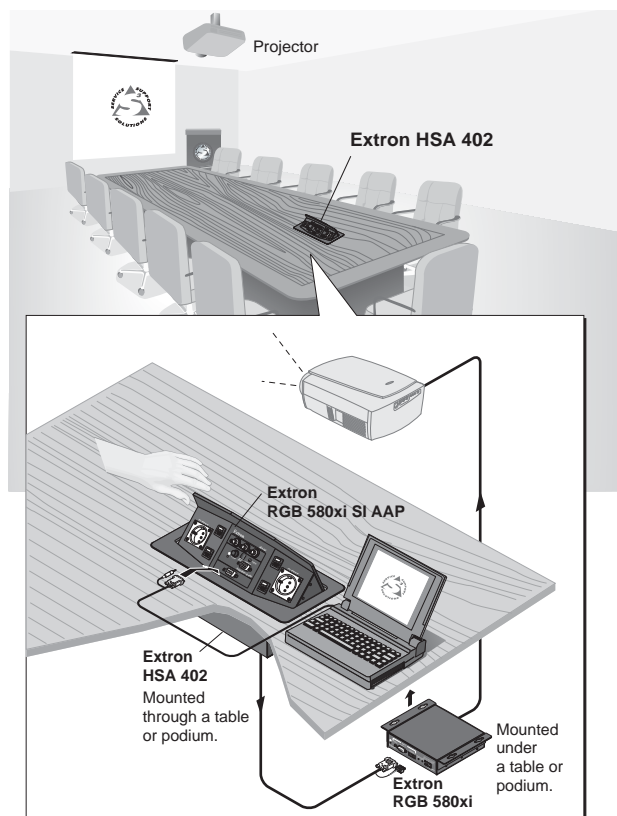
The functionality of the HSA enclosures can be optimized with one or two RGB 580xi AAPs connected and routing video and audio signals to one or two RGB 580xi Remote Interfaces (figure 1-3, on the next page).

### Features

- UL/c-UL listing / CSA certification
- Easy access to connectors and controls
- Durable mechanical movement and latching mechanism
- A variety of surface finishes
- A variety of RJ-45 connector bezel colors included: black, red, blue, orange, gray, white, ivory, yellow, and green

**NOTE** *The space behind the AAP panel is limited. The on-line Connectivity Configurator, available at [www.extron.com](http://www.extron.com), offers guidance as to the fit of AAPs into this space.*

- Compact size
- Easy installation of two double-space Extron AAPs
- RJ-45 (CAT 5/6) network, data, or communications connections (terminated in accordance with the TIA/EIA T 568 A standard)
- Grounded AC receptacle(s)



**Figure 1-3 — HSA 402 International and RGB 580xi application**



# Chapter Two

## Installation

Installation Overview

Preparing the Routing Template

Preparing the Table and Mounting the Enclosure

Cabling and Installing the AAPs

Cabling the Enclosure

Routing the AAP Cables

Bezels

## Installation Overview

Install and set up the HSA surface access enclosure as follows:

- 1 If you have an unprepared mounting template, prepare the template. See “Preparing the Routing Template” on the next page.
- 2 If desired, install the optional RJ-45 to RJ-11 conversion kit(s) to replace one or more RJ-45 connectors with RJ-11 connectors. Refer to the *RJ-45 to RJ-11 Conversion Kit* manual.
- 3 If desired, install the optional flexible conduit kit to replace the removable AC power cord. Refer to the *Flexible Conduit Kit* manual.
- 4 Cut a hole in the surface where the enclosure will be installed and install the enclosure. The clamshell clamps the enclosure to the table. See “Preparing the Table and Mounting the Enclosure” in this chapter.
- 5 Run all cables necessary to support the AC and RJ-45 connectors and all planned AAP connectors. Leave enough slack in the cables to connect them to the underside of the enclosure or to the rear of the AAPs before the AAPs are installed in the enclosure.
- 6 Turn off all of the equipment to be connected. Ensure that the equipment connected to the RJ-45 connectors and the connections for any AAPs are all turned off and disconnected from the power source.
- 7 If applicable, connect cables to the rear connectors on the AAPs to be installed in the HSA. Install the desired AAPs on the front panel of the enclosure. See “Cabling and Installing the AAPs” in this chapter.
- 8 Connect the power and RJ-45 cables to the underside of the enclosure. See “Cabling the Enclosure” in this chapter.
- 9 Route and secure the AAP cables inside the clamshell. See “Routing the AAP Cables” in this chapter.
- 10 Peel the protective coating from the top surface.
- 11 Connect the power cords and turn on the devices that connect to the surface access enclosure.

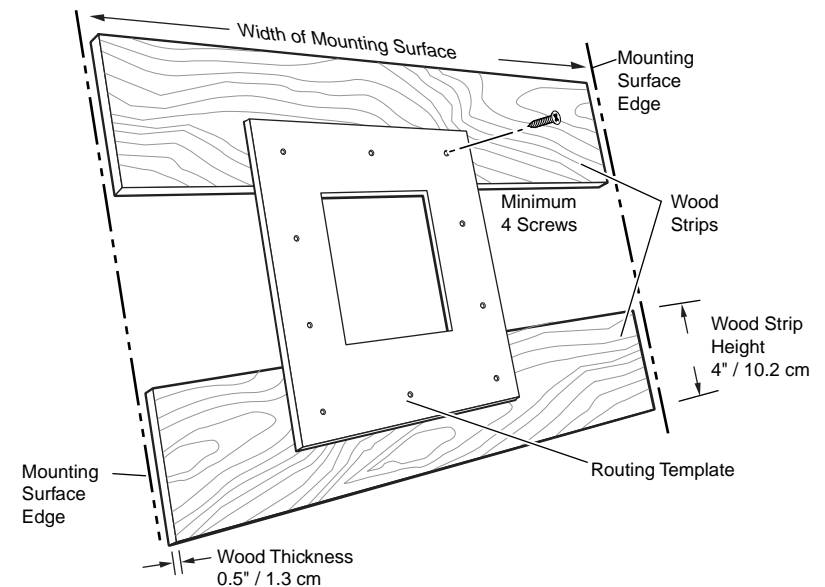
## Preparing the Routing Template

Extron offers a metal template for each HSA model. Appendix A lists the HSA 400/402 template part numbers. Extron recommends using this template as a guide to cut the hole in the table where the HSA will be installed.

**NOTE** *The metal routing template is reusable. Do not discard this template when the installation is complete. Save it for installing future HSA enclosures of the same size.*

1. Cut two 1/2" x 4" (approximately 13 mm x 102 mm) strips of soft, finished lumber at least long enough to span the distance between the desired installation location on the table or other mounting surface and the edges of the mounting surface (figure 2-1).

**CAUTION** *Do not allow the wood screws to protrude through the bottom of the wooden strips. Protruding screws will mar the table when the template is used.*



**Figure 2-1 — Prepared mounting template**

These strips raise the routing template above the mounting surface to provide room for the router's collar, protect the mounting surface, and extend the routing template's reach so that it can be clamped to the edge of the surface.

2. Using four or more short wood screws, secure the mounting template to the lumber strips.



### Preparing the Table and Mounting the Enclosure

The preferred and **recommended** method for preparing the table is to use the appropriate Extron metal routing template and a router. See the part numbers for the templates in appendix A, "Reference Information".

Alternatively, you can use a paper cut-out template (see appendix A, "Reference Information") and a sabre saw or keyhole saw, but this method is **not recommended**.

Prepare the table as follows:

**CAUTION** *The opening in the table for the HSA should be cut only by licensed and bonded craftspeople. Exercise care to prevent scarring or damaging the furniture.*

*The routing templates for the various HSA models are **not interchangeable**. If you use the wrong template, you **will** cut an improperly-sized hole. If you use a larger template than required, the cut will result in gaps in the table surface on either side of the enclosure.*

*The surfaces of the HSA enclosure have screws and other protruding hardware that could damage fine furniture. Do not rest the enclosure on unprotected furniture.*

**NOTE** *The metal routing template is reusable. Do not discard the template when the installation is complete. Save it for installing other HSA products of the same size.*

1. Locate the desired mounting location on the tabletop or other installation surface. Mark the location.

**CAUTION** *Ensure that only the wooden strips on the routing template contact the furniture. Failure to do so may mar the furniture.*

2. Place the mounting template assembly on the table, centered on the mounting location. Angle the template for the optimum positioning. If necessary, use a square to ensure that the template is properly positioned. Extron is not responsible for improperly-positioned HSA products.
3. Once the template assembly is positioned properly, secure the assembly to the table with C-clamps (figure 2-2).

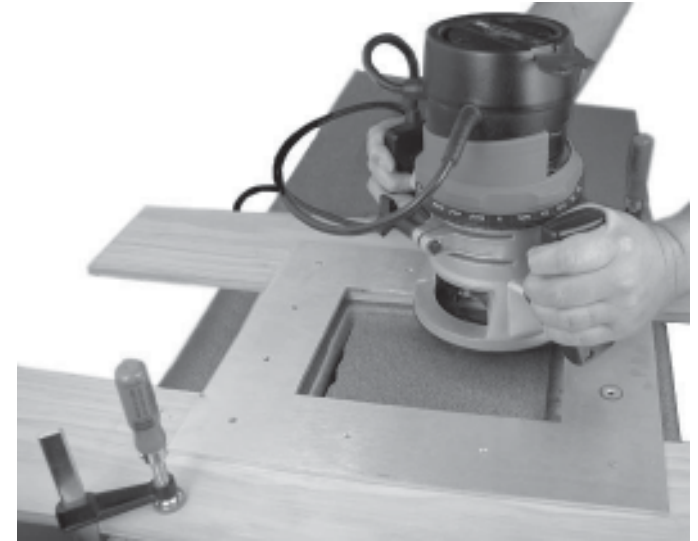


Figure 2-2 — Cutting the opening with a router

**WARNING** *Wear safety glasses when operating the router. Failure to comply can result in eye injury.*

4. Using a router with a 5/8" (or 16 mm) outside diameter guide bushing and a 1/2" (or 12 mm or 12.7 mm) diameter straight router bit, carefully cut the opening in the table surface (figure 2-2).
5. Remove the C-clamps and the routing template.

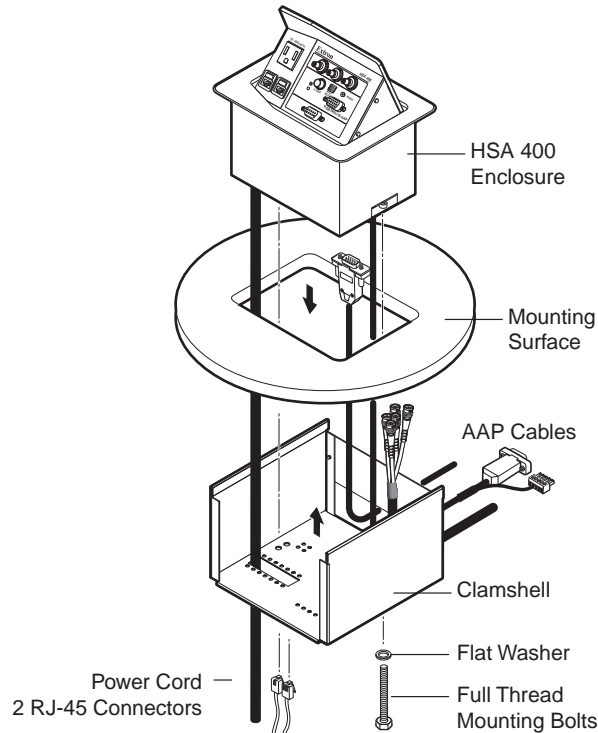
**WARNING** *The flanged edges of the top of the surface enclosure are sharp. To prevent personal injury, exercise caution when the HSA is not installed in a table.*

**CAUTION** *The flanged edges of the top of the surface enclosure are bevelled to an ultra-fine thickness of less than 0.04 (4/100)" (approximately 1 mm). These edges are soft and can be easily nicked or bent. Exercise caution when handling and mounting the enclosure. Mishandling can damage the appearance of the enclosure.*

6. Remove the plastic strips that protect the flanged edges of the top of the surface enclosure. If a sticky residue remains, remove it with an appropriate metal cleaning product.

**CAUTION** *Do not use isopropyl alcohol or other solvents to clean the HSA. Strong solvents **will** ruin some finishes.*

7. Carefully lower the HSA enclosure into the hole to test the fit. If necessary, remove the enclosure and use a file or rasp to enlarge or smooth the edges of the opening.
8. From the underside of the table, bolt the clamshell to the enclosure with two bolts of optimum length (included) (figure 2-3).



**Figure 2-3 — Mounting the HSA 400 enclosure**

9. Peel any remaining protective coating from the enclosure.

## Cabling and Installing the AAPs

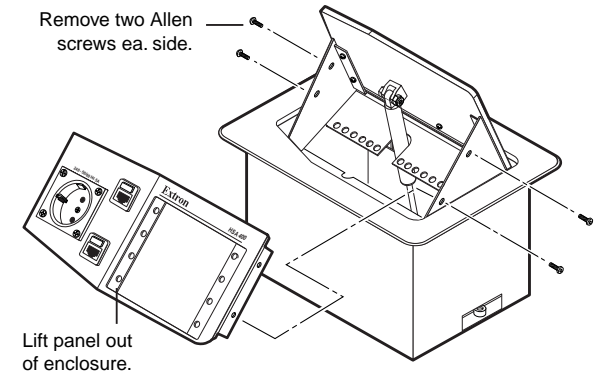
**NOTE** The space behind the AAP panel is limited. The on-line Connectivity Configurator, available at [www.extron.com](http://www.extron.com), offers guidance as to the fit of AAPs into this space.

The various Extron single- and double-space AAP devices, including the various RGB 580xi AAPs, can be mounted to the HSA. See appendix A, "Reference Information", for RGB 580xi AAP part numbers.

The screws needed for installing an AAP are built into its front panel, so no additional screws are needed.

**WARNING** Ensure that AC power is disconnected before servicing the HSA unit.

1. Remove the four hex head screws on the right and left sides of the front panel (figure 2-4). Retain the screws. Lift the panel away from the enclosure.



**Figure 2-4 — Removing the front panel from an HSA 400 International**

2. Cable the rear of the AAPs before attaching the AAPs to the enclosure. Route the cables through the hole in the underside of the surface mount enclosure and connect them to the rear of the AAPs. If applicable, refer to the cabling information in the documentation for the AAP.

- 3. Insert each of the AAP's screws through the holes in the AAP opening of the front panel. Secure each AAP to the panel with the provided captive washers and #4-40 nuts (figure 2-5).

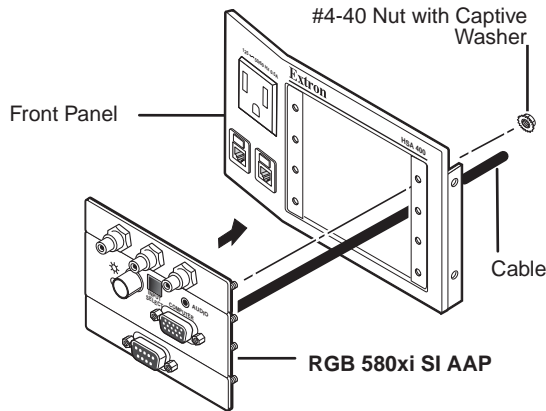


Figure 2-5 — Mounting an AAP device to an HSA 400 US front panel

- 4. Replace the front panel in the surface mount enclosure and secure it in place with the hex head screws removed in step 2. If you lose a front panel screw, two spare screws are stored in the underside of the clamshell.

Cabling the Enclosure

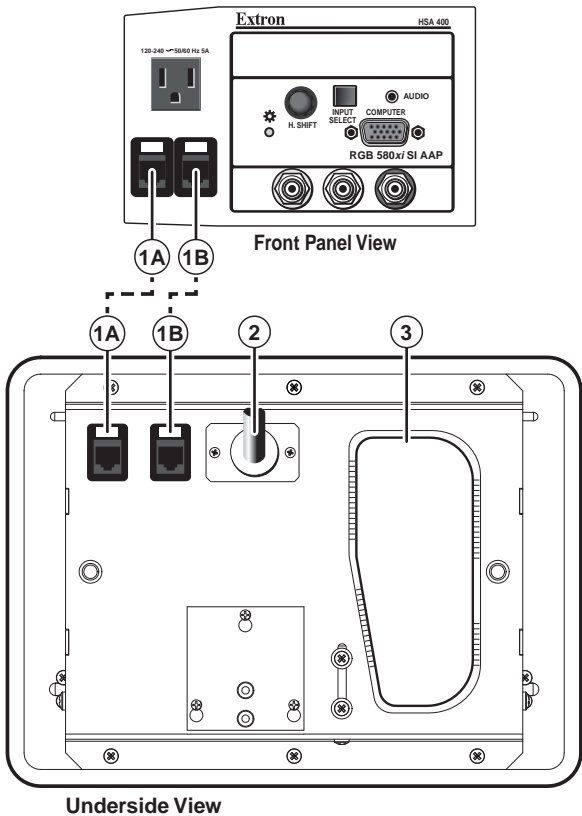
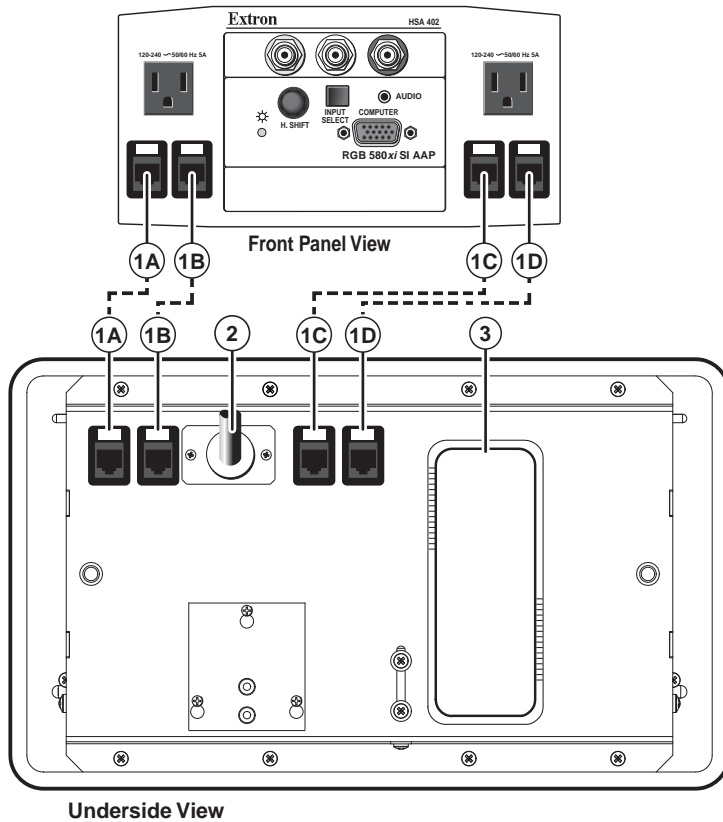


Figure 2-6 — HSA 400 enclosure underside features



**Figure 2-7 — HSA 402 enclosure underside features**

- ① **RJ-45 connectors** — See “Cabling the RJ-45 connectors” on the next page.

**NOTE** All RJ-45 connectors are terminated in accordance with the **TIA/EIA T 568 A** standard.

- ② **AC power connector** — Connect this power cord to the power source.

**NOTE** For US domestic versions, this power cord is permanently connected to the HSA. Connect the power cord to a 125VAC, 60 Hz, 10A power source.  
For international versions, this power cord is a removable IEC power cord. Connect the power cord to a 220-250V, 50-60 Hz, 10A power source.



**NOTE** The Universal AC outlet is fully compatible with Europlug, British, Indian, Danish, and Italian plug types. See the universal AC outlet guide on the Extron Web site, [www.extron.com](http://www.extron.com), for compatibility details on all plug types.

- ③ **Cable access holes**

## Cabling the RJ-45 connectors

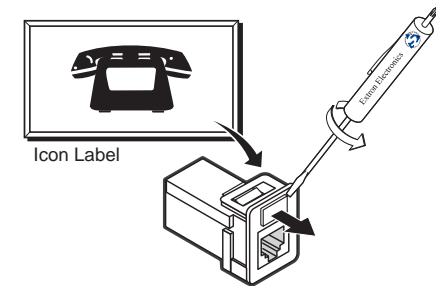
Plug one end of a twisted pair (TP) cable into each of these RJ-45 female connectors on the underside of the HSA (figure 2-6 on page 2-9 and figure 2-7 on page 2-10). Connect the other end to an appropriate telecommunications or data network or to an Extron TP product.

**NOTE** An RJ-11 (telephone) jack can be plugged directly into the RJ-45 jack.

Cables inside the HSA route the network cables from the front panel to the underside of the enclosure. The bottom RJ-45 connections match up with the front panel RJ-45 connector locations identified on figure 2-6 and figure 2-7. For example, match the front panel RJ-45 (CAT 5/6) network, data, or communications connections connection ①A with the underside RJ-45 connector ①A, match ①B with ①B, and so forth.

**NOTE** Only connectors ①A and ①B are present on the HSA 400.

If necessary, on the front panel, have a qualified service person replace the connector icon by prying the old icon off of the connector plug-in with an Extron Tweezer or small screwdriver (figure 2-8) and snapping a new icon in place.



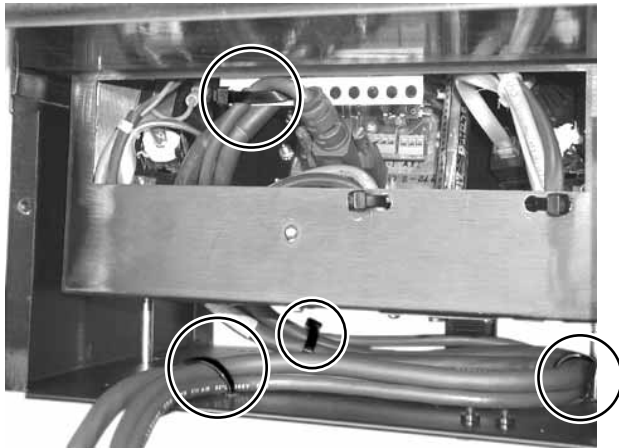
**Figure 2-8 — Changing the connector icon**

### Routing the AAP Cables

The AAP cables must have freedom of movement to permit opening and closing the surface mount enclosure. At the same time, they need to be restrained to prevent them from rubbing against the edges of the enclosure cable access hole in the underside of the surface mount enclosure. Rubbing against the cable access hole edges can damage the cables. Route and secure the AAP cables as follows:

1. Open the top panel to extend the AAP cables to their maximum pull.
2. Experiment with AAP cable positioning to ensure that the cables do not rub against the edges of the AAP cable hole and to ensure that the cable pull does not restrict the movement of the top panel. Figure 2-9 shows the cables routed to the side, which proved effective in tests at Extron.
3. Secure the AAP cables to the tie-down holes with tie wraps in the clamshell and the enclosure in the locations shown on figure 2-9.

Rear View into HSA and Clamshell

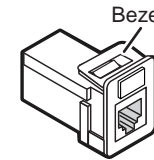


Secure the AAP cables at the circled locations.

**Figure 2-9 — HSA 402 AAP cable routing, rear view**

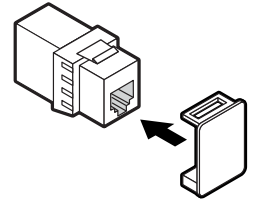
### Bezels

The HSA ships with RJ-45/RJ-11 connector bezel plug-ins in a variety of colors and a black, blank bezel.



To change to a different color connector bezel, or if a connector is not needed or desired, replace the connector bezel plug-in on the front panel with a bezel of a different color or a blank plug-in. See "Replacing the Bezels" in chapter 3.

If no connector is desired, snap the interior RJ-45 connector onto the rear of the blank bezel plug-in to hold it conveniently out of the way. Retain the removed connector bezel plug-in for any possible later use.





# 3

## Chapter Three

### Maintenance and Modifications

Replacing an AAP

Replacing the Bezels

Removing and Replacing the Enclosure

Replacing the Gas Lift

Adjusting the Top Surface Level

## Maintenance and Modifications

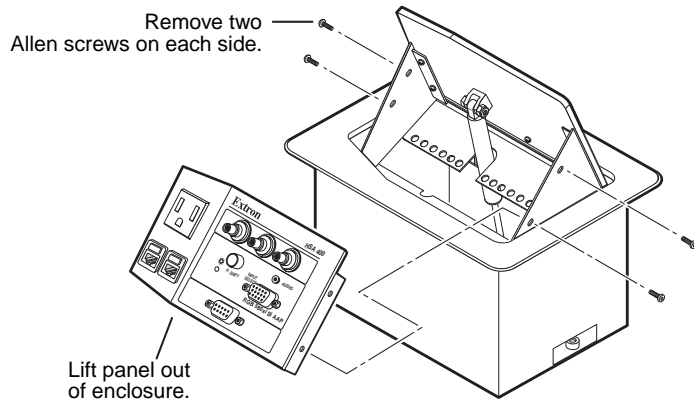
The HSA surface mount enclosures can be modified in the future to replace an AAP or to change the color or appearance of the bezel plug-ins. The most probable corrective maintenance procedures required are leveling the top surface and adjusting its height and replacing the gas lift. Most of the maintenance procedures require removing the surface mount enclosure from the table.

### Replacing an AAP

Replace one or more AAPs as follows:

**WARNING** Ensure that AC power is disconnected before servicing the HSA unit.

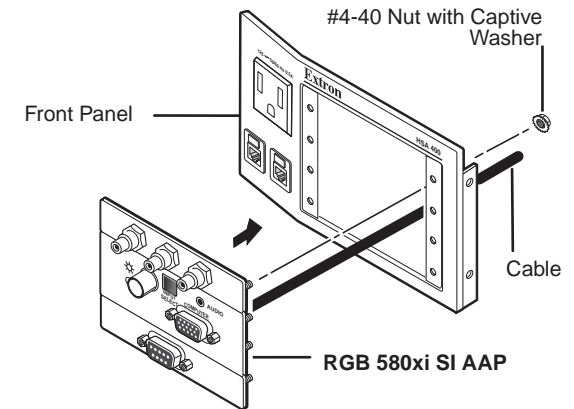
1. On the underside of the clamshell and in the enclosure, cut the tie wraps that route the AAP cables out of the way.
2. Remove the four hex head screws on the right and left sides of the front panel (figure 3-1). Retain the screws. Lift the panel away from the enclosure.



**Figure 3-1 — Removing the front panel**

3. Disconnect any cables from the rear of the AAPs that are to be replaced. If a cable is no longer required in your system, carefully pull the cable out through the bottom of the surface mount enclosure and the clamshell.

4. Remove the AAP(s) to be replaced from the front panel by unscrewing the nuts on the rear of the panel that fasten the plates to the faceplate (figure 3-2).



**Figure 3-2 — Mounting an AAP device**

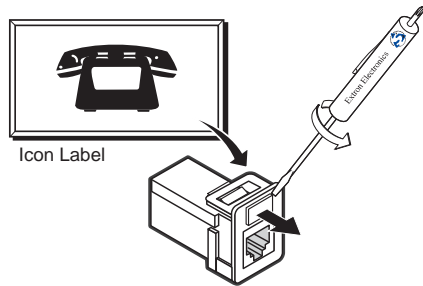
5. Cable the rear of the AAPs to be installed before attaching the AAPs to the enclosure. Route the cables through the hole in the underside of the surface mount enclosure and connect them to the rear of the AAPs. If applicable, refer to the cabling information in the AAP documentation.
6. Insert each AAP's screws through the holes in the AAP opening of the front panel. Secure each AAP to the enclosure with the provided captive washers and #4-40 nuts.
7. Replace the front panel in the surface mount enclosure and secure it in place with the hex head screws removed in step 2. If you lose a front panel screw, two spare screws are stored in the underside of the clamshell.
8. To prevent wear and tear caused by cable movement, secure the AAP cables underneath the table. See "Routing the AAP Cables" in chapter 2, "Installation".



### Replacing the Bezels

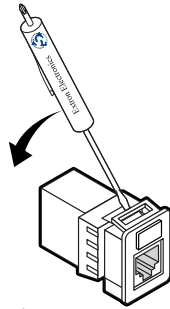
The HSA ships with RJ-45/RJ-11 connector bezel plug-ins in a variety of colors and a black, blank bezel. Replace a bezel as follows:

1. Remove the four hex head screws on the right and left sides of the front panel (figure 3-1). Retain the screws. Lift the panel away from the enclosure.
2. With an Extron Tweezer or a small screwdriver, push down on and gently twist on the front of each connector detent to disconnect the connector from the rear of the front panel plug-in.
3. Pinch the top and bottom bezel detents together and push the bezel through the front panel.
4. Snap a replacement bezel in place. If necessary, replace the connector icon by prying the old icon off of the connector plug-in with a Tweezer (figure 3-3) and snapping a new icon in place.



**Figure 3-3 — Changing the connector icon**

5. Snap the internal RJ-45 connector onto the back of the front panel enclosure bezel plug-in.
6. Replace the front panel in the surface mount enclosure and secure it in place with the hex head screws that were removed in step 1.



### Removing and Replacing the Enclosure

The procedure for replacing the gas lift requires removing the HSA 400 or HSA 402 from the table. Adjusting the top surface level may also require removal of the HSA from the table. Remove and replace the surface mount enclosure as follows:

**WARNING** *Ensure that AC power is disconnected before servicing the HSA unit.*

1. On the underside of the clamshell and in the enclosure, cut the tie wraps that route the AAP cables out of the way.
2. Disconnect the IEC power cord and the RJ-45 connectors from the underside of the surface mount enclosure.
3. Through the access hole in the rear of the enclosure, disconnect the 3-prong cable connector on the interior AC cable (figure 3-4).

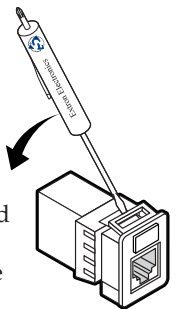


**Figure 3-4 — Disconnecting the interior AC cable**

4. On front panel, remove the four hex head screws on the right and left sides of the front panel (figure 3-1). Retain the screws. Lift the panel away from the enclosure as far as the connected cables allow.

**NOTE** *Ensure that the edges of the connector panels do not scratch the finished surface of the top panel flange when removing the panels.*

5. With an Extron Tweezer, push down on and gently twist on the front of each connector detent to disconnect the connector from the rear of the front panel bezel plug-in.





**CAUTION**

The flanged edges of the top of the surface enclosure are bevelled to an ultra-fine thickness of less than 0.04 (4/100)" (approximately 1 mm). These edges are soft and can be easily nicked or bent. Exercise caution when handling and mounting the enclosure. Mishandling can damage the appearance of the enclosure.

**NOTE**

The surfaces of the HSA enclosure have screws and other protrusions that could damage fine furniture. Do not rest the enclosure on unprotected furniture.

6. Remove the front panel from the enclosure.
7. Disconnect any cables from the rear of the existing AAPs. Carefully pull the cables out through the bottom of the surface mount enclosure.
8. On the underside of the table, remove the two bolts that secure the clamshell to the surface mount enclosure (figure 3-5). Lift the enclosure out of the table.

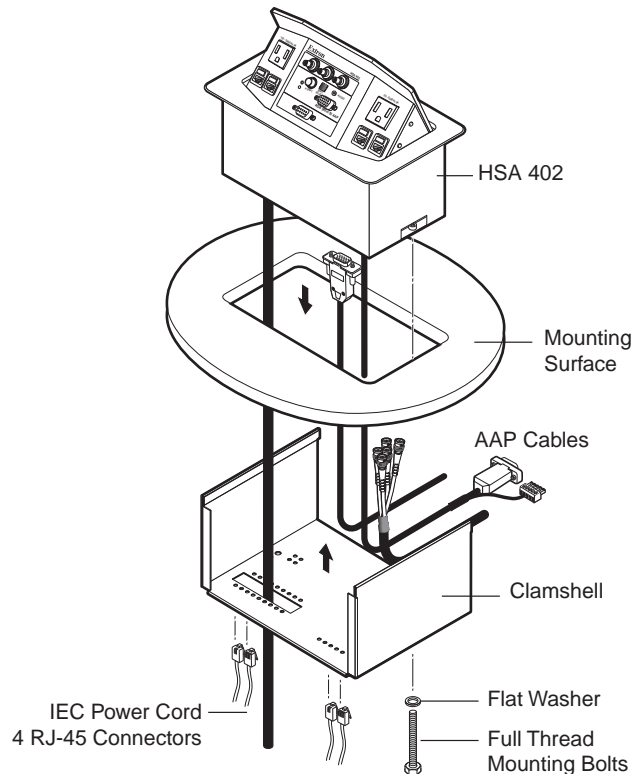
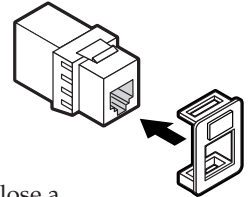


Figure 3-5 — Removing the HSA 402 from the table

9. Perform the desired maintenance procedure.
10. If the surface is not level, adjust the top surface. See "Adjusting the Top Surface Level", later in this chapter.
11. Carefully lower the HSA enclosure into the table opening. From the underside, bolt the clamshell to the enclosure with the two bolts removed in step 8.
12. Connect the IEC power cord and RJ-45 cables to the connectors on the underside of the surface mount enclosure.
13. Cable the rear of the AAPs that are installed on the front panel. Route the cables through the hole in the underside of the surface mount enclosure and connect them to the rear of the AAPs. If applicable, refer to the cabling information in the AAP documentation.
14. Snap the interior RJ-45 connectors onto the rear of the front panel bezel plug-ins.
15. Replace the front panel in the surface mount enclosure and secure it in place with the hex head screws that were removed in step 4. If you lose a front panel screw, two spare screws are stored in the underside of the clamshell.
16. Reconnect the interior AC power cable.
17. To prevent wear and tear caused by cable movement, secure the AAP cables underneath the table. See "Routing the AAP Cables" in chapter 2, "Installation".



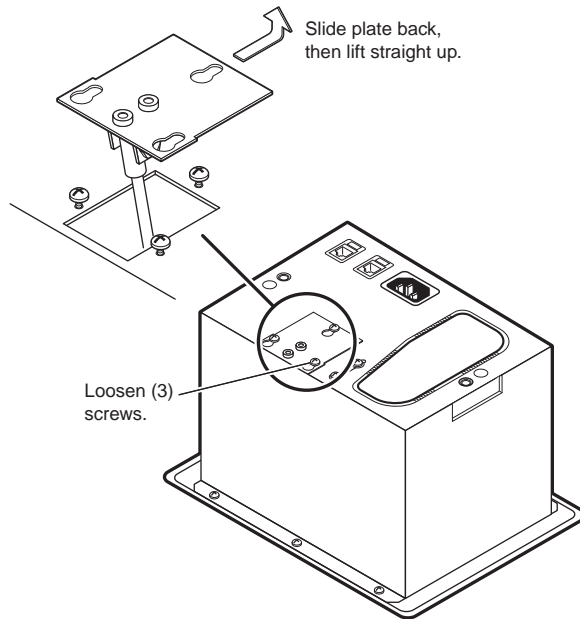
### Replacing the Gas Lift

The gas lift that raises the HSA surface is rated for 100,000 opening and closing cycles. Contact the Extron S<sup>3</sup> Sales & Technical Support Hotline at the nearest phone number listed on the rear cover of this manual to obtain a replacement gas lift. Replace the gas lift as follows:

**WARNING** Ensure that AC power is disconnected before servicing the HSA unit.

**CAUTION** When the HSA 400/402 is upside-down, the latch may be ineffective. If the latch releases, the enclosure will tip and could damage the flanged edges. Keep a hand on the enclosure to keep it from tipping.

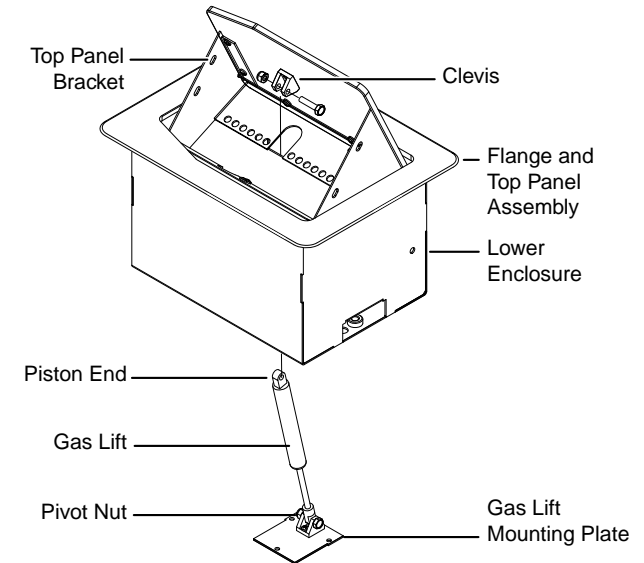
1. Remove the surface mount enclosure from the table. See "Removing and Replacing the Enclosure", steps 1 through 8. Place the enclosure upside-down on a horizontal surface. To protect the finish, place the enclosure on a soft cloth.
2. Loosen the three Phillips head screws that secure the gas lift mounting plate in place (figure 3-6).



**Figure 3-6 — Releasing the gas lift**

3. Slide the gas lift mounting plate toward the center of the enclosure, releasing the mounting plate from the enclosure (figure 3-6).

4. Turn the gas lift mounting plate counterclockwise until the pivot nut on the plate comes free from the shaft of the gas lift (figure 3-7).



**Figure 3-7 — Replacing the gas lift**

5. Turn the surface mount enclosure onto its back side and open the top panel.

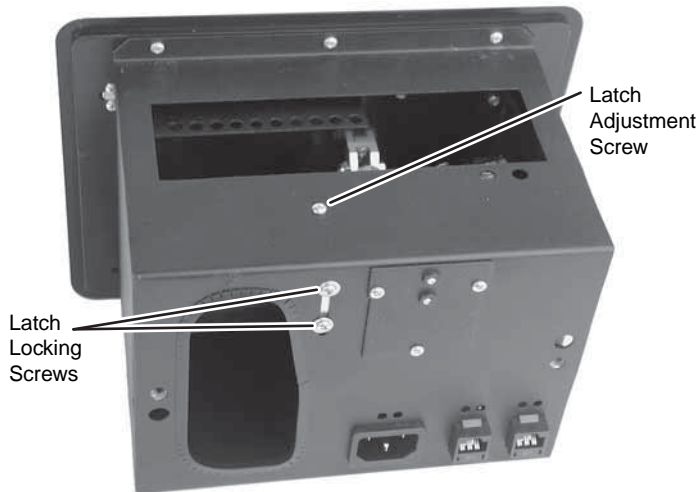
**NOTE** With the gas lift disconnected, the top panel must be manually lifted.

6. Remove and retain the 9/32" nut and bolt that secure the gas lift to the top panel clevis. Pull the gas lift out of the enclosure.
7. Insert the piston end of the replacement gas lift through the hole in the bottom of the enclosure adjacent to the latch, and secure the lift in the clevis on the top panel with the nut and bolt that were removed in step 6.
8. Thread the pivot nut on the gas lift mounting plate onto the shaft of the gas lift and tighten it several turns.
9. Firmly push the gas lift mounting plate into position on the underside of the enclosure, engaging the three mounting screws with the holes in the plate. Holding the plate in position, secure it to the enclosure with the three screws that were loosened in step 2.
10. Reinstall the surface mount enclosure. See "Removing and Replacing the Enclosure", steps 11 through 17.

### Adjusting the Top Surface Level

Level the top surface of the HSA as follows:

1. If necessary, in order to view the surface and the underside of the enclosure simultaneously, remove the surface mount enclosure from the table. See “Removing and Replacing the Enclosure”, steps **1** through **8**.
2. If necessary, close and latch the top panel.
3. Slightly loosen the two latch locking screws (figure 3-8) on the underside of the surface mount enclosure. These screws lock the latch in place once it is adjusted.



**Figure 3-8 — Adjust the top surface level**

4. Gently turn the adjustment screw on the rear of the surface mount enclosure to raise or lower the top panel until it is level with the flange. Turning the screw counterclockwise raises the panel and turning it clockwise lowers the panel.
5. Tighten the two latch locking screws on the underside of the surface mount enclosure.
6. If the surface mount enclosure was removed, reinstall it. See “Removing and Replacing the Enclosure”, steps **11** through **17**.



## HSA 400/402 Series Surface Access Products

# Appendix A

## Reference Information

Specifications

HSA Part Numbers

Included Parts

Routing Templates

Replacement Parts and Accessories

Interface Accessories

Top Plate Dimensions

Specifications

General

**NOTE** The Universal AC outlet is fully compatible with Europlug, British, Indian, Danish, and Italian plug types. See the Universal AC outlet guide on the Extron Web site, [www.extron.com](http://www.extron.com), for compatibility details on all plug types

Rack mount ..... No, but furniture mountable  
Enclosure type ..... Metal  
Clamshell dimensions diagram (figure A-1)

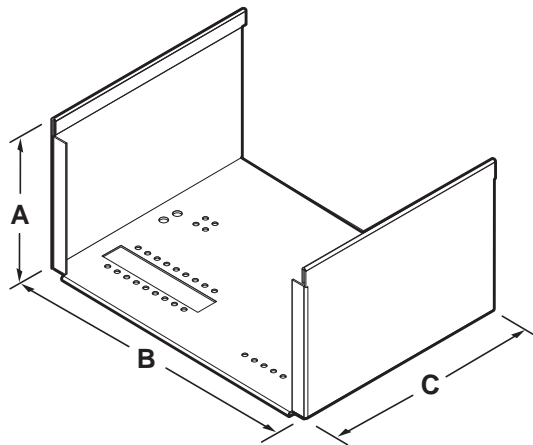


Figure A-1 — Clamshell dimensions

Enclosure dimensions

**CAUTION** Use the appropriate metal Extron routing template or refer to the surface cutout dimensions here before cutting a hole in the furniture or other surface. Pay special attention to the direction the unit will face; the unit's AAP and connector access side is underlined. Extron is not responsible for miscut mounting holes.

HSA 400 US/domestic  
Top plate (outer rim) 8.613" W x 6.425" D  
(21.88 cm W x 16.39 cm D)  
Top plate (tilt plate). 6.663" W x 4.475" D  
(16.92 cm W x 11.37 cm D)  
Surface cutout ..... 8.113 ±0.0325" W (front) x 5.925 ±0.0325" D  
(20.61 ±0.083 cm W x 15.05 ±0.083 cm D)

Clamshell (figure A-1) **A** = 5.25" (13.3 cm)  
**B** = 7.75" (19.7 cm)  
**C** = 7.75" (19.7 cm)

HSA 402 US/domestic  
Top plate (outer rim) 10.844" W x 6.425" D  
(27.54 cm W x 16.32 cm D)  
Top plate (tilt plate). 8.894" W x 4.475" D  
(22.59 cm W x 11.37 cm D)  
Surface cutout ..... 10.344 ±0.0325" W (front) x 5.925 ±0.0325" D  
(26.27 ±0.083 cm W x 15.05 ±0.083 cm D)  
Clamshell (figure A-1) **A** = 5.25" (13.3 cm)  
**B** = 9.80" (24.9 cm)  
**C** = 7.75" (19.7 cm)

HSA 400 International  
Top plate (outer rim) 10.113" W x 6.425" D  
(25.74 cm W x 16.32 cm D)  
Top plate (tilt plate). 8.163" W x 4.475" D  
(21.88 cm W x 11.37 cm D)  
Surface cutout ..... 9.613 ±0.0325" W (front) x 5.925 ±0.0325" D  
(24.42 ±0.083 cm W x 15.05 ±0.083 cm D)  
Clamshell (figure A-1) **A** = 5.25" (13.3 cm)  
**B** = 9.25" (23.5 cm)  
**C** = 7.75" (19.7 cm)

HSA 402 International  
Top plate (outer rim) 13.844" W x 6.425" D  
(35.16 cm W x 16.32 cm D)  
Top plate (tilt plate). 11.894" W x 4.475" D  
(30.21 cm W x 11.37 cm D)  
Surface cutout ..... 13.344 ±0.0325" W (front) x 5.925 ±0.0325" D  
(33.89 ±0.083 cm W x 15.05 ±0.083 cm D)  
Clamshell (figure A-1) **A** = 5.25" (13.3 cm)  
**B** = 12.8" (32.5 cm)  
**C** = 7.75" (19.7 cm)

Product weight ..... 8.4 lbs (3.8 kg)  
Shipping weight ..... 11 lbs (5.0 kg)  
Listings, certifications ..... UL, c-UL  
Compliances ..... CE  
MTBF (gas lift) ..... 100,000 cycles  
Warranty ..... 3 years parts and labor

**NOTE** Specifications are subject to change without notice.

HSA Part Numbers

HSA 400	Part number
HSA 400 USA Enclosure (black anodized finish)	60-415-01
HSA 400 International	60-700- <i>nn</i>

HSA 402	Part number
HSA 402 USA Enclosure (black anodized finish)	60-416-02
HSA 402 International	60-699- <i>nn</i>

**NOTE** For the international versions, the *nn* in the part number identifies the AC power connector and finish (black anodized or brushed aluminum). Specify the desired power connector and finish when ordering.

**NOTE** The USA versions of the HSA 400 and HSA 402 are also available in a brushed aluminum finish. Visit the Extron web site, [www.extron.com](http://www.extron.com), for more part numbers.

Included Parts

Part	Part number
HSA 400 & HSA 402 User's Manual	
Snap-in icon inserts	
RJ-45 connector bezel plug-in inserts (assorted colors)	70-201-01
1/4 - 20, 1", 1 1/2", 2", 2 1/2" full thread bolts	

-or- M6 x 25 mm, 40 mm, 50 mm, 65 mm full thread bolts

Routing Templates

Template	Part number
HSA 400 US/domestic routing template	70-189-01
HSA 400 International routing template	70-189-02
HSA 402 US/domestic routing template	70-190-01
HSA 402 International routing template	70-190-02

Replacement Parts and Accessories

Part	Part number
HSA latch replacement kit	70-194-01
HSA 400/402 (R1 and L1) RJ-11 cable kit (figure A-2)	70-225-01

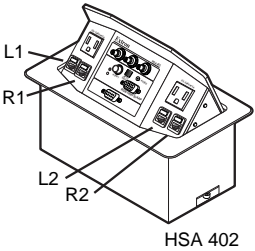


Figure A-2 — RJ-11 cable kit identification

HSA 402/822 (R2 and L2) RJ-11 cable kit (figure A-2)	70-226-01
HSA 400/402 flexible conduit adapter kit	70-227-01

Interface Accessories

Accessory	Part number
RGB 580 <i>xi</i>	60-362-01
RGB 580 <i>xi</i> AAP 3' (black)	70-128-02
RGB 580 <i>xi</i> AAP 6' (black)	70-129-02
RGB 580 <i>xi</i> S AAP 3' (black)	70-134-02
RGB 580 <i>xi</i> S AAP 6' (black)	70-135-02
RGB 580 <i>xi</i> SI AAP 3' (black)	70-137-02
RGB 580 <i>xi</i> SI AAP 6' (black)	70-138-02

Top Plate Dimensions

The preferred and recommended method for cutting the table is to use the correct size metal routing template (figure A-3 and chapter 2, "Installation") and a router. See the part numbers for the templates on page A-5.

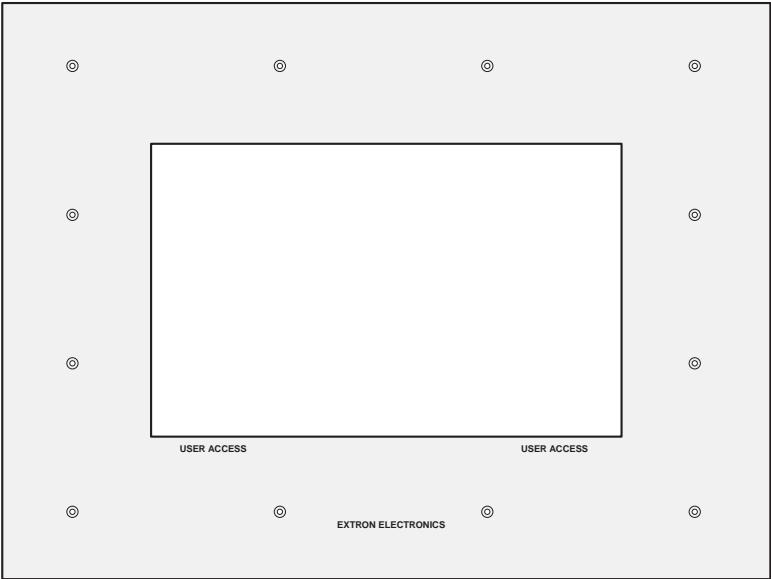


Figure A-3 — HSA metal routing template

If you choose not to use the metal routing template available from Extron, the cut-out templates (figure A-4, figure A-5, figure A-6, and figure A-7) on the following pages will help you properly prepare the mounting surface. The cutout templates are **not to scale** and are **for reference only**. The surface cut-out area dimensions on all templates are **C** and **D** and **marked in bold type**.

For full size paper templates, visit the Extron Web site ([www.extron.com](http://www.extron.com)) or call the Extron S<sup>3</sup> Sales & Technical Support Hotline.

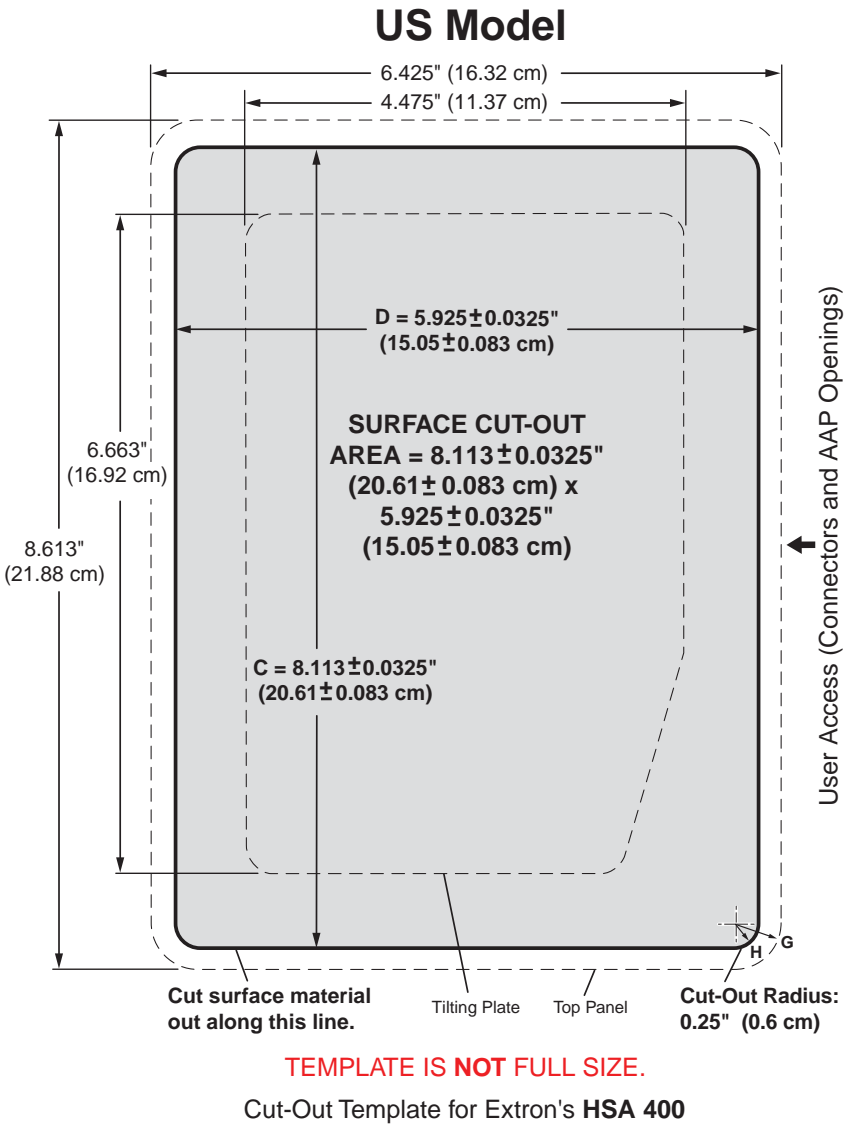
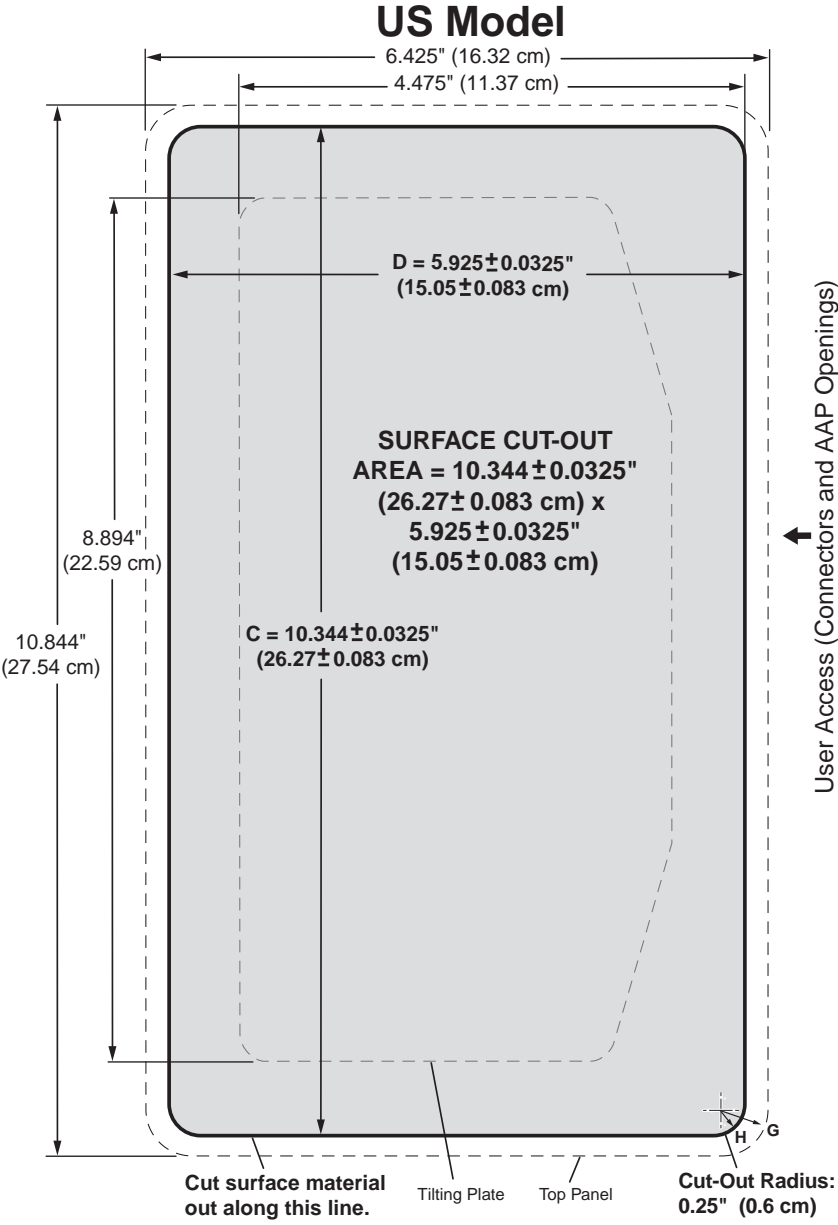


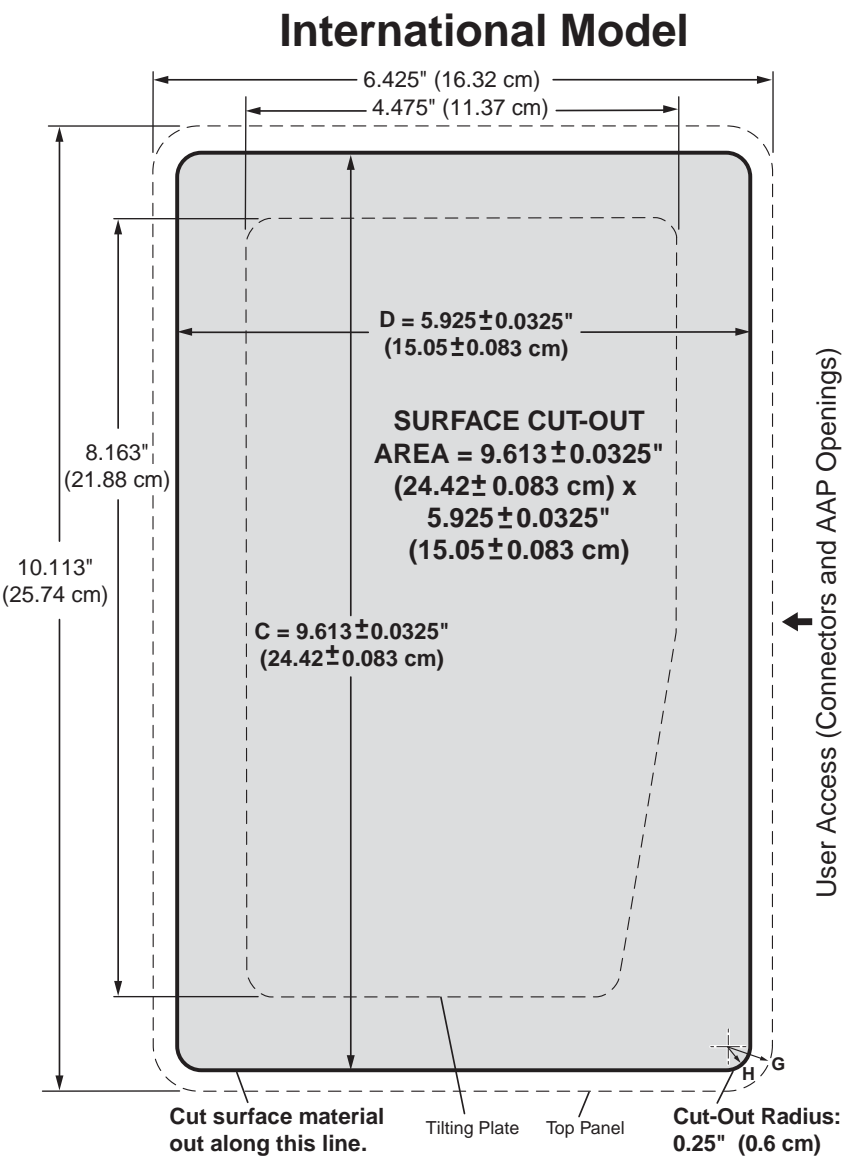
Figure A-4 — HSA 400 US/domestic cut-out template



TEMPLATE IS NOT FULL SIZE.

Cut-Out Template for Extron's HSA 402

Figure A-5 — HSA 402 US/domestic cut-out template

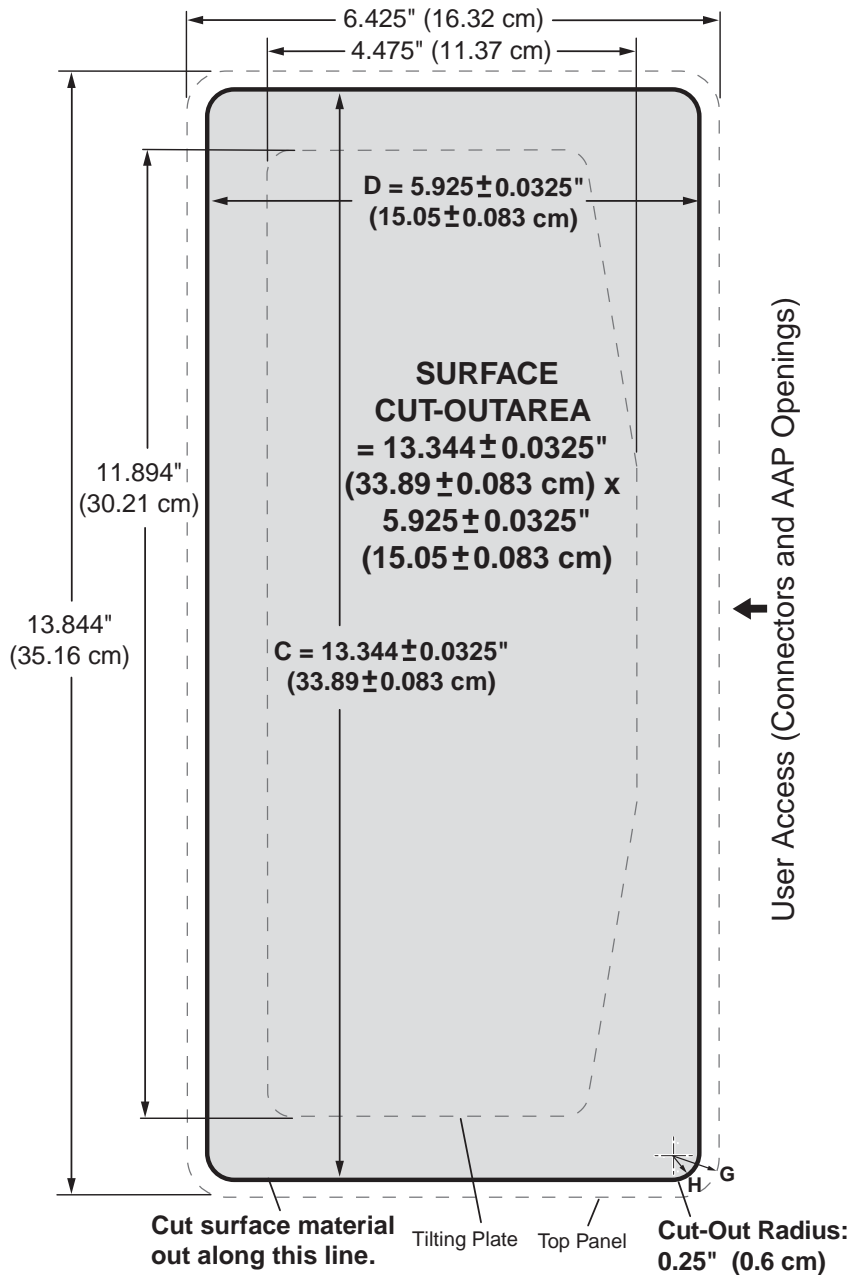


TEMPLATE IS NOT FULL SIZE.

Cut-Out Template for Extron's HSA 400

Figure A-6 — HSA 400 International cut-out template

## International Model



**TEMPLATE IS NOT FULL SIZE.**

Cut-Out Template for Extron's **HSA 402**

*Figure A-7 — HSA 402 International cut-out template*



**HSA 400/402 Series Surface Access Products**

# B

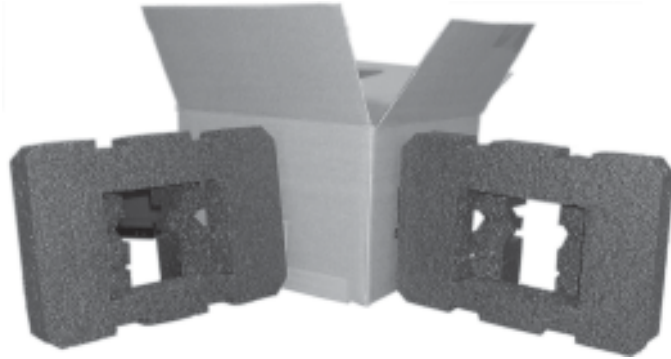
## Appendix B

**Packaging for Shipment**



## Packaging for Shipment

The HSA's ultra-fine machined surfaces and moving parts make them vulnerable to damage caused by mishandling during shipment if they are improperly packaged. If, for any reason, you need to return an HSA to Extron, first contact Extron to obtain a return kit. The return kit, which reduces the chances of damage during shipment, includes a sturdy shipping carton and foam cut to fit the HSA (figure B-1).



**Figure B-1 — HSA 400/402 return kit**

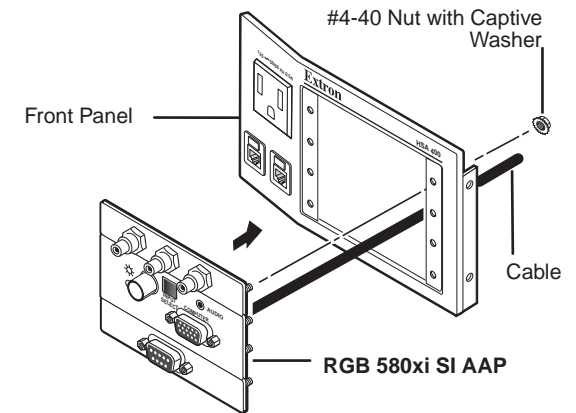
Package an HSA for shipment as follows:

1. Contact the Extron S<sup>3</sup> Sales & Technical Support Hotline to obtain a return kit. Extron will send the return kit to the location you specify.

**WARNING** The flanged edges of the top of the surface enclosure are sharp when the HSA is removed from the table. Exercise caution when handling to prevent personal injury.

**CAUTION** The flanged edges of the top of the surface enclosure are bevelled to an ultra-fine thickness of less than 0.04 (4/100)" (approximately 1 mm). These edges are soft and can be easily nicked or bent. Exercise caution when handling and mounting the enclosure. Mishandling can damage the appearance of the enclosure.

2. Disconnect all cables and remove the HSA from the table or desk. See "Removing and Replacing the Enclosure", steps 1 through 8, in chapter 3, "Maintenance and Modifications".
3. Remove any AAPs by unscrewing the nuts on the rear of the panel that fasten the plates to the faceplate (figure B-2).



**Figure B-2 — Removing an AAP device**

4. Place the enclosure upside-down on a horizontal surface. To protect the finish, place the enclosure on a soft cloth or rubber mat.
5. Bolt the clamshell to the enclosure with the two bolts and flat washers that are included in the return kit (figure B-3).



**Figure B-3 — Attaching the clamshell**

## Packaging for Shipment, cont'd

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6. Install the plastic strips that protect the flanged edges of the top of the surface enclosure (figure B-4).



**Figure B-4 — Installing protective strips**

7. Release (tilt up) the top panel.

8. Insert the HSA and the clamshell into one of the foam shells (figure B-5). Either open end of the clamshell and the open top panel will fit into the recesses in the foam.

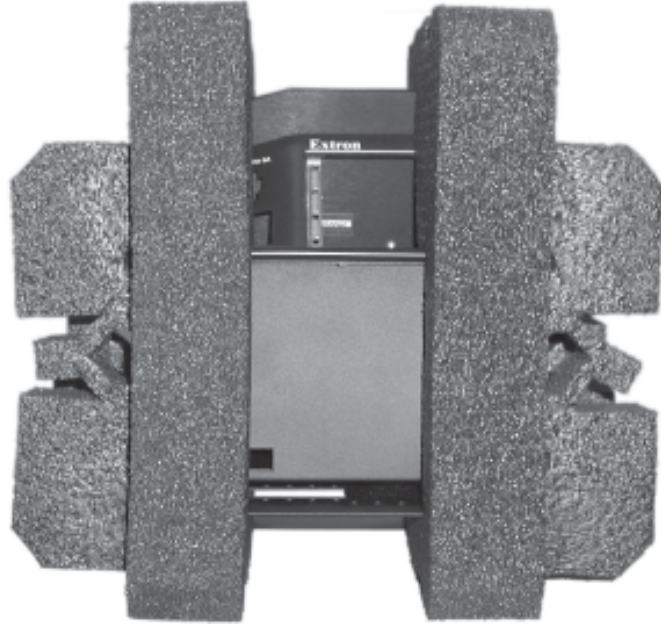


**Figure B-5 — Installing the foam shell**

## Packaging for Shipment, cont'd

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9. Insert the opposite end of the clamshell into the remaining foam shell (figure B-6). Firmly push the foam shells together as far as they will go to completely suspend the HSA and clamshell. The sides of the clamshell protrude through slots in the foam.



*Figure B-6 — HSA suspended in the foam*

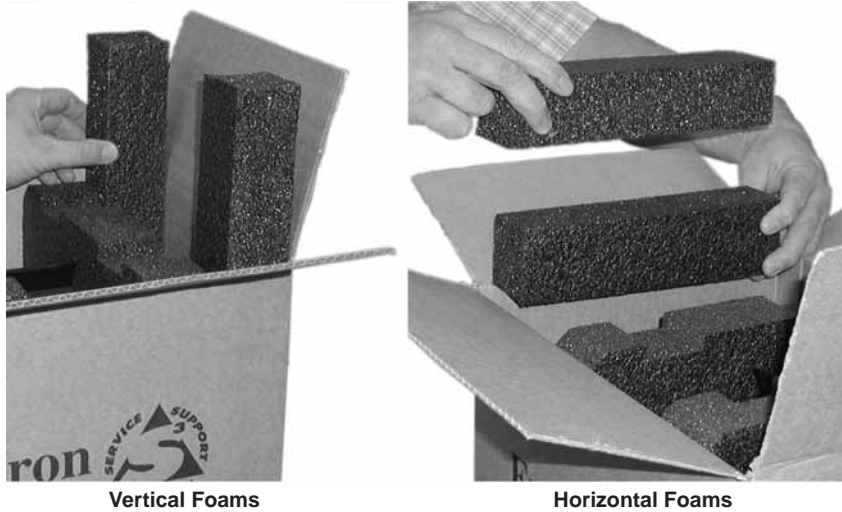
10. Lower the foam-protected HSA into the shipping carton (figure B-7).



*Figure B-7 — Placing the HSA in the shipping carton*

## Packaging for Shipment, cont'd

11. **HSA 400 US/domestic version only.** These smaller HSAs in the foam shells do not fit snugly in the shipping carton. Pad either side with the extra foam that was included in the return kit. Insert the foam vertically in the carton's corners on one side of the carton and horizontally on the other side of the carton (figure B-8).



**Figure B-8 — Padding the carton with foam, HSA 400 US/domestic version only.**

12. Close the shipping carton and seal it with high quality shipping tape.
13. Ship the HSA to Extron using a reputable shipping company.